

## REMARKS

Claims 19-20 and 23-33, as amended, are currently pending in the above-captioned application for the Examiner's review and consideration. Claims 25-28 have been amended to add a period at the end of each claim. Claim 23 has been amended to change the upper end of the thermal expansion coefficient range from 86 to 85, as supported, *e.g.*, by one of the priority documents, *i.e.*, French Application No. 19705364.1 (translation), at page 3, line 26. Claims 26 and 28 have been further amended to adjust the lower end of the potassium oxide content range and the upper end of the strontium oxide content range, respectively. Support for these amendments can be found, *e.g.*, in the priority documents, *i.e.*, French Application No. 19707521.1 (translation), at page 10, line 38, and German Application No. 19710289.1 (translation), at Example 3, respectively. A complete list of currently pending claims is attached hereto as Appendix B for the Examiner's convenience. As no new matter has been added, Applicants respectfully request entry of these amendments into the record at this time.

Claim 26 was objected to on page 2 of the Office Action for not ending in a period. Applicants have amended claims 25-28 to add a period at the end of each claim to overcome the objection. Thus, Applicants respectfully request that the objection be withdrawn.

Claims 19-20 and 23-33 were rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 5,990,023 to Siedel et al. ("Seidel") for the reasons set forth on pages 2-7 of the Office Action. Applicants respectfully traverse the rejection.

Applicants respectfully submit that Siedel does not constitute prior art under 35 U.S.C. § 102(e). Siedel has a filing date of March 11, 1998. In contrast, the present application claims priority under 35 U.S.C. § 119 to all of the following: German Application No. 197 10 289.1, filed March 13, 1997; French Application No. 97/05364, filed April 30, 1997; and French Application No. 97/07521, filed June 17, 1997, each of which has a priority date preceding the U.S. filing date of Seidel.

The Examiner has indicated on pages 5-7 of the Office Action certain aspects of the present claims that are allegedly not supported by the aforementioned priority documents. In addition, the Examiner has stated that Applicants "**should carefully review their priority documents and the claims to be sure that the priority documents provide adequate written support for the present claims.**" *See* Office

Action at the bottom of page 7 (emphasis in original). While the Examiner has obviously compared the priority documents to the claim elements and ranges, Applicants note that the Examiner has not found a lack of support for *any* of the claimed elements or ranges in *all three* priority documents. See Office Action at pages 5-7. Applicants respectfully remind the Examiner that, since all of the priority documents have priority dates preceding the U.S. filing date of Seidel, Applicants need only show support for each claim element and each range in **one** of the priority documents, not in **all** of them. Applicants respectfully request that the Examiner, when making a rejection, carefully review all the priority documents before alleging that each and every claim element is not supported in *at least one* priority document. For the Examiner's convenience, Applicants provide a table below showing each and every claim element and range, as amended, and where it is supported in a priority document.

Claimed Element	In Claim(s)	Supporting Priority	Location
55-75% SiO <sub>2</sub> 64.5-75% SiO <sub>2</sub>	19, 25-27 28	19705364.1 (trnsln.) 19705364.1 (trnsln.)	Page 4, line 14 Example 6 (lower) Page 4, line 14 (upper)
4.5-10% Na <sub>2</sub> O  5-10% Na <sub>2</sub> O 4.5-8% Na <sub>2</sub> O 5-9% Na <sub>2</sub> O	19  25 26-27 28	19705364.1 (trnsln.) 19707521.1 (trnsln.) 19707521.1 (trnsln.) 19705364.1 (trnsln.) 19705364.1 (trnsln.)	Page 4, line 17 (lower) Page 7, line 19 (upper) Page 7, line 39 Page 4, line 17 Examples 1-3, 8
7-12% CaO  8-12% CaO 7-11% CaO	19  25 26-28	19705364.1 (trnsln.) 19707521.1 (trnsln.) 19707521.1 (trnsln.) 19705364.1 (trnsln.)	Page 4, line 19 (lower) Page 8, line 2 (upper) Page 8, line 2 Page 4, line 19
0-7% Al <sub>2</sub> O <sub>3</sub> 0-5% Al <sub>2</sub> O <sub>3</sub> 0-1% Al <sub>2</sub> O <sub>3</sub>	19, 25-26 27 28	19707521.1 (trnsln.) 19705364.1 (trnsln.) 19705364.1 (trnsln.) 19710289.1 (trnsln.)	Page 7, line 37 Page 4, line 15 Page 4, line 15 (lower) Example 3 (upper)
0-8% ZrO <sub>2</sub> 3-8% ZrO <sub>2</sub> 3-7.5% ZrO <sub>2</sub>	19, 25-26 27 28	19705364.1 (trnsln.) 19705364.1 (trnsln.) 19705364.1 (trnsln.)	Page 5, lines 3-5 Page 14, line 16 Examples 2, 5, 11-12
0-8% K <sub>2</sub> O 2.9-8% K <sub>2</sub> O  3.5-7.5% K <sub>2</sub> O	19, 25 26  27-28	19707521.1 (trnsln.) 19707521.1 (trnsln.) 19707521.1 (trnsln.) 19705364.1 (trnsln.)	Page 8, line 1 Page 10, line 38 (lower) Page 8, line 1 (upper) Page 4, line 18
0-5% MgO 0-2% MgO	19, 26 28	19705364.1 (trnsln.) 19705364.1 (trnsln.)	Page 7, lines 25-26 Page 7, lines 26-27
0-3% B <sub>2</sub> O <sub>3</sub> 3-7% SrO	19 28	19705364.1 (trnsln.) 19705364.1 (trnsln.) 19710289.1 (trnsln.)	Page 5, lines 9-10 Examples 6-8 (lower) Example 3 (upper)
0-1.5% BaO	28	19705364.1 (trnsln.)	Examples 1-12

71.5-75% SiO <sub>2</sub> + ZrO <sub>2</sub> + Al <sub>2</sub> O <sub>3</sub>	33	19705364.1 (trnsln.)	Example 5 (lower) Page 5, lines 15-16 (upper)
$\phi$ between 0.5 and 0.85N/(mm <sup>2</sup> •°C)	19	19707521.1 (trnsln.)	Page 5, lines 23-24
$\phi^2 \cdot c/a$ between 0.7 and 2 MPa <sup>2</sup> /°C <sup>2</sup>	24	19707521.1 (trnsln.)	Page 5, line 27 (upper) Page 6, line 23 (lower)
$\phi$ between 0.75 and 0.84	29	19705364.1 (trnsln.)	Example 1 (lower) Page 2, lines 30-31 (upper)
working point <1200°C	19	19707521.1 (trnsln.)	Page 5, lines 25-26
working point <1190°C	23	19707521.1 (trnsln.)	Page 7, lines 1-3
$\alpha_{20-300}$ between 60 and 88 x10 <sup>-7</sup> °C <sup>-1</sup>	19	19707521.1 (trnsln.)	Claim 6 (lower)
$\alpha_{20-300}$ between 75.6 and 85 x10 <sup>-7</sup> °C <sup>-1</sup>	23	19705364.1 (trnsln.) 19707521.1 (trnsln.) 19705364.1 (trnsln.)	Page 3, lines 18-21 (upper) Page 12, line 20 (lower) Page 3, line 26 (upper)
strain point >570°C	19	19707521.1 (trnsln.)	Page 6, line 29
strain point between 580 and 590°C	23	19705364.1 (trnsln.)	Claim 4 (page 11, lines 17-19)
softening point >750°C	20	19707521.1 (trnsln.)	Claim 3
softening point ≥805°C	23	19707521.1 (trnsln.)	Page 11, line 12
electrical resistivity log $\rho_{(250^\circ)}$ >6.6	29	19705364.1 (trnsln.)	Page 2, lines 32-33
electrical resistivity log $\rho_{(250^\circ)}$ >8	30	19705364.1 (trnsln.)	Page 4, lines 5-7
Article comprising composition	31-32	19707521.1 (trnsln.)	Claims 12-13

Each and every element and range recited in each currently pending claim, as amended, is fully supported by *at least one* priority document. Accordingly, since support for each pending claim (as amended) of the application can be found in a priority document that has an earlier effective filing date than the U.S. filing date of Seidel, Seidel is not prior art to the currently pending claims, as amended. Thus, the anticipation rejection of the pending claims, as amended, cannot be maintained and should be withdrawn.

Furthermore, even if the claims are not entitled to a priority date earlier than the U.S. filing date of Seidel, the claims are not anticipated by Seidel. Seidel does not specifically disclose *several* properties recited in the instant claims (*e.g.*, strain point, log  $\rho_{(250^\circ)}$ , and  $\phi^2 \cdot c/a$  coefficient, as acknowledged on pages 6-7 of the Office Action). The Examiner, however, assumes these to be inherent characteristics, due to the chemical

similarity between the glasses disclosed in Seidel and the instantly claimed glass. Applicant respectfully submits that these properties are not inherently disclosed in Seidel, as alleged by the Examiner.

Applicant reminds the Examiner that a similar inherency argument was used by the Examiner in rejecting the claims over PCT Publication No. WO 96/11887 to Koch *et al.* ("Koch"). The rejection of the claims over Koch, however, was withdrawn following the submission by Applicants of a Declaration under 37 C.F.R. § 1.132 of Dr. Patrick Garnier. *See* Office Action at page 2. The rejection over Koch, which the Declaration overcame, involved the alleged disclosure by Koch of a glass that has overlapping ranges of all the components of the claimed glass composition, except the  $\phi$  and  $\phi^2 \cdot c/a$  coefficients, which were not mentioned. The rejection was based on the fact that these coefficients would have ranges that overlapped with those of the claimed glass compositions *inherently*, because each of the glasses are of similar compositions. However, the submitted Declaration effectively overcame the rejection because, as stated in the present Office Action "there is no basis for asserting that the glass of [Koch] inherently possesses the property." *See* Office Action at page 2. The Garnier Declaration, filed with Applicants' Amendment on December 9, 2002, demonstrated that the claimed  $\phi^2 \cdot c/a$  coefficient cannot be deemed inherent simply because they are in glasses chemically similar to the claimed glasses. By the same reasoning, at least the  $\phi^2 \cdot c/a$  coefficient is also not inherent in the glass disclosed by Seidel.

Applicants respectfully submit that, since there is no basis for the glass of Koch to inherently possess a given property although the glass has a similar chemical make-up to the claimed compositions, then there is no basis for assuming that *any* glass, including the glass of Seidel, having a similar chemical composition would *necessarily* possess that particular given property. If a property is not inherently disclosed for one similar prior art glass, it cannot be inherently disclosed for another similar glass without express disclosure, because the nature of the property is such that it *may or may not* be present in a given composition. *See* M.P.E.P. § 2112; *see also In re Robertson*, 169 F.3d 743, 745 (Fed. Cir. 1999) (stating that "[i]nherency, however, *may not* be established by probabilities or possibilities. The mere fact that a certain thing *may* result from a given set of circumstances is *not sufficient*."") (citations omitted) (emphasis added). As a result, the  $\phi^2 \cdot c/a$  property cannot be inherent in Seidel, just as it was not inherent in Koch. Neither reference discloses, nor even remotely suggests, the existence of the  $\phi^2 \cdot c/a$

property, nor acknowledges the importance of maintaining the  $\phi^2 \cdot c/a$  property within a particular range of values.

Similarly, there is no basis for alleging that other properties not disclosed in the chemically similar glasses of Seidel, *e.g.*, the strain point and/or the  $\log \rho_{(250^\circ)}$ , are inherent. Chemically similar glasses having differences in one property will likely have differences in other properties.

The assumption of inherency in composition claims is premised upon the corollary that “if the composition is physically the same, it *must* have the same properties.” *See* M.P.E.P. § 2112 (emphasis added). Logically, the contrapositive of this statement is that if a composition does not have the same properties, then it *cannot* physically be the same. Therefore, although the compositions disclosed by both Koch and Seidel may *seem* similar to that recited in the instant claims, as amended, they must not be, as the Declaration demonstrates that at least one property differs. As a result, it can no longer be assumed that otherwise chemically similar compositions inherently have similar properties without disclosure of same. Applicants respectfully submit that such a demonstration of lack of inherency need not be presented for every cited prior art reference. The previously submitted Declaration of Dr. Patrick Garnier should suffice.

For any of the foregoing reasons, Applicants respectfully request that the anticipation rejection of claims 19-20, 23-33 be reconsidered and withdrawn.

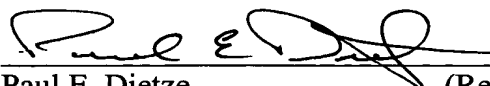
As a result of the foregoing, Applicants respectfully submit that the amendments made to the ranges in claims 23, 26, and 28 were not associated with patentability. Applicants have asserted above that, even if the claims were not entitled to priority, Seidel does not anticipate previously pending claims 23, 26, and 28, due to the failure of the inherency argument. Therefore, Applicants respectfully submit that the claims have not been amended for a reason associated with patentability, but merely to expedite prosecution and to more quickly secure allowance.

Applicants respectfully submit that all claims are in condition for allowance, early notice of which would be greatly appreciated. Should the Examiner disagree, Applicants respectfully request that the Examiner call the undersigned attorney for Applicants to arrange for a telephonic or personal interview to discuss any remaining issues and expedite the allowance of this application.

No fees are believed due for this submission. Should any fees be required, however, please charge the required fees to Pennie & Edmonds LLP Deposit Account No. 16-1150.

Respectfully submitted,

Date: April 25, 2003

  
Paul E. Dietze 45,679 (Reg. No.)  
*For:* Victor N. Balancia (Reg. No. 31,321)  
**PENNIE & EDMONDS LLP**  
1667 K Street, NW  
Suite 1000  
Washington, DC 20006

Enclosures



## APPENDIX A

### Amendments Made to the Pending Claims

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The rewritten claims were amended as follows:

23. (Amended) The composition of claim 19, wherein the working point is less than 1190°C, the softening point is at least 805°C, the thermal expansion coefficient is between 75.6 and [86] 85 X 10<sup>-7</sup>°C<sup>-1</sup>, and the strain point is between 580 and 590°C.

25. (Amended) The composition of claim 19, comprising the following components:

SiO <sub>2</sub>	55-75%
Na <sub>2</sub> O	5-10%
CaO	8-12%
Al <sub>2</sub> O <sub>3</sub>	0-7%
ZrO <sub>2</sub>	0-8%
K <sub>2</sub> O	0-8%

26. (Twice Amended) The composition of claim 19, comprising the following components:

SiO <sub>2</sub>	55-75%
Na <sub>2</sub> O	4.5-8%
K <sub>2</sub> O	[2-8%] <u>2.9-8%</u>
CaO	7-11%
Al <sub>2</sub> O <sub>3</sub>	0-7%
ZrO <sub>2</sub>	0-8%
MgO	0-5%

27. (Amended) The composition of claim 19 comprising the following components:

SiO <sub>2</sub>	55-75%
ZrO <sub>2</sub>	3-8%
Na <sub>2</sub> O	4.5-8%
K <sub>2</sub> O	3.5-7.5%
CaO	7-11%
Al <sub>2</sub> O <sub>3</sub>	0-5%

28. (Amended) The composition of claim 19, comprising the following components:

SiO <sub>2</sub>	64.5-75%
ZrO <sub>2</sub>	3-7.5%
Na <sub>2</sub> O	5-9%
K <sub>2</sub> O	3.5-7.5%
CaO	5-11%
SrO	[3-9%] <u>3-7%</u>
Al <sub>2</sub> O <sub>3</sub>	0-1%
MgO	0-2%
BaO	0-1.5%





## APPENDIX B

### List of Currently Pending Claims, As Presently Amended

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The currently pending claims read as follows:

19. (Twice amended) A silica-soda-lime glass composition comprising the following components:

SiO <sub>2</sub>	55-75%
Na <sub>2</sub> O	4.5-10%
CaO	7-12%
Al <sub>2</sub> O <sub>3</sub>	0-7%
ZrO <sub>2</sub>	0-8%
K <sub>2</sub> O	0-8%
MgO	0-5%
B <sub>2</sub> O <sub>3</sub>	0-3%

wherein the glass composition has a  $\bar{y}$  coefficient of between 0.5 and 0.85 N/(mm<sup>2</sup>•°C), a working point of less than 1200°C, a thermal expansion coefficient  $\alpha_{20-300}$  of between 60 and 88 x 10<sup>-7</sup>°C<sup>-1</sup>, and a strain point of greater than 570°C.

20. The composition of claim 19 which has a softening point of greater than 750°C.

23. (Amended) The composition of claim 19, wherein the working point is less than 1190°C, the softening point is at least 805°C, the thermal expansion coefficient is between 75.6 and 85 X 10<sup>-7</sup>°C<sup>-1</sup>, and the strain point is between 580 and 590°C.

24. (Amended) The composition of claim 19 wherein the  $\phi$  coefficient satisfies the relationship

$$0.7 \text{ MPa}^2/\text{°C}^2 < \phi^2 \cdot c/a < 2 \text{ MPa}^2/\text{°C}^2.$$

25. (Amended) The composition of claim 19, comprising the following components:

SiO <sub>2</sub>	55-75%
Na <sub>2</sub> O	5-10%
CaO	8-12%
Al <sub>2</sub> O <sub>3</sub>	0-7%
ZrO <sub>2</sub>	0-8%
K <sub>2</sub> O	0-8%.

26. (Twice Amended) The composition of claim 19, comprising the following components:

SiO <sub>2</sub>	55-75%
Na <sub>2</sub> O	4.5-8%
K <sub>2</sub> O	2.9-8%
CaO	7-11%
Al <sub>2</sub> O <sub>3</sub>	0-7%
ZrO <sub>2</sub>	0-8%
MgO	0-5%.

27. (Amended) The composition of claim 19 comprising the following components:

SiO <sub>2</sub>	55-75%
ZrO <sub>2</sub>	3-8%
Na <sub>2</sub> O	4.5-8%
K <sub>2</sub> O	3.5-7.5%
CaO	7-11%
Al <sub>2</sub> O <sub>3</sub>	0-5%.

28. (Amended) The composition of claim 19, comprising the following components:

SiO <sub>2</sub>	64.5-75%
ZrO <sub>2</sub>	3-7.5%
Na <sub>2</sub> O	5-9%
K <sub>2</sub> O	3.5-7.5%
CaO	5-11%
SrO	3-7%
Al <sub>2</sub> O <sub>3</sub>	0-1%
MgO	0-2%
BaO	0-1.5%.

29. (Amended) The composition of claim 19, wherein  $\phi$  is between 0.75 and 0.84, and having an electrical resistivity such that  $\log \rho_{(250^\circ)}$  is greater than 6.6.

30. (Amended) The composition of claim 29 wherein the electrical resistivity is such that  $\log \rho_{(250^\circ)}$  is greater than 8.

31. An article comprising the glass composition of claim 19.

32. (Twice amended) The article of claim 31 in the form of a monolithic glazing panel, a plasma-screen substrate, an electroluminescent-screen or a cold-cathode-screen substrate.

33. The composition of claim 19, wherein the sum of the SiO<sub>2</sub>, ZrO<sub>2</sub>, and Al<sub>2</sub>O<sub>3</sub> contents is from 71.5% to 75% by weight.